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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
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15/11,786 12/17/98 LEWNO

J	DON02-P-728
EXAMINER	

IM22/0611
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NIL ART UNIT P	PAPER NUMBER
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1714
DATE MAILED:

06/11/99

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 131-169 is/are pending in the application.
- ☐ Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☒ Claim(s) 131-169 is/are allowed.
- ☐ Claim(s) _____ is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of Reference Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2 (6 sheets)
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

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1. The preliminary amendments of 12/17/98 and 1/25/99 have been entered. Claims 131-169 are pending.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 131-169 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 36-50 of U.S. Patent No. 5853895 Lewno.

Although the conflicting claims are not identical, they are not patentably distinct from each other because although the claims differ in scope, the claims of the patentee fall within the scope of the instantly claimed invention. It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the instantly claimed high amine density plural amine compound as the adhesive of Lewno because the patentee discloses this to be a well known commercially available polyurethane adhesive component at column 14, lines 55-67 and column 15, lines 1-19 and the ordinary skilled artisan would have expected such commercially available adhesives to perform the function stated in the patented claims because it is a two component adhesive.

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 131-169 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat.

✓ No. 5551197 Repp et al. in view of US Pat. No. 4963636 ✓ Mulhaupt et al., SAE
Technical paper series ✓ 910758 "Application of RIM Urethane to One Side of Glass for
Automotive Windows" Csokasy et al., US Pat. No. 3282014 ✓ Bamford et al., US Pat.
No. 5072984 ✓ Jackson, US Pat. No. 5294168 ✓ Kronbetter, US Pat. No. 4793099 ✓ Friese
et al., US Pat. No. 5508111 ✓ Schmucker, US Pat. No. 5338767 ✓ Sartelet et al., US Pat.
No. 4364214 ✓ Morgan et al., US Pat. No. 4743672 Goel, ✓ Betamate 73100/73003
Technical Bulletin, the Betamate Structural Adhesives data table, and US Pat. No.
4995666 ✓ Schurmann.

Repp et al. discloses a vehicle window assembly in which the window mounting members are adhered to only the inner surfaces of the glass panel. This arrangement falls within the structural arrangement of the instant claims. See the abstract; figures 1-15; column 1, lines 5-10; column 2, lines 6-68; column 3, lines 1-57; column 4, lines 40-50; and column 5, lines 1-10. Repp et al. discloses adhering the glass to the hinge using a layer of hotmelt urethane adhesive as a temporary fixturing adhesive and a curable

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polyurethane adhesive that gives a permanent bond (column 7, lines 12-55). This falls within the scope of the adhesion method steps of the instant method claims. Repp et al. prefers urethane adhesives (column 8, lines 47-50).

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the instantly claimed rapid set, rapid cure, two component urethane adhesives because the broad recitation of urethane adhesives by Repp et al. encompasses such adhesives, the preferred one component adhesives of Repp et al. (column 8, lines 39-47) do not teach away from the two component adhesives, and Sartelet et al., Csokasy et al., Mulhaupt et al., and Goel et al. disclose the use of two component adhesives for bonding metal to glass.

Sartelet et al. shows two component polyurethanes to be useful for bonding windows to window profiles at column 1, lines 15-31 and that such adhesives may be cured in 1 minute to about 5 hours (column 1, line 65 to column 2, line 11). This falls within the scope of the instantly claimed set time period and rapid cure. The examiner notes that his personal experience with adhering substrates to other substrates generically has shown him that adhesives are often sold based upon their set and cure times, i.e. the label defines many two part adhesives in terms of how long they take to cure and routine consideration of the thing to be bonded gives the ordinary skilled artisan the information needed to determine how fast the set should be. It is really a matter of "design choice". If you do not wish to set up elaborate time consuming, expensive jigs, braces, or other holding

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means, you use a fast set adhesive. If the jigs are going to be there anyway, i.e. when you build an airplane, slower set adhesives are usable. The ordinary skilled artisan can see that time is money and in an assembly line application, such as building cars, quicker is better.

The applicant's previous arguments with regard to column 2, lines 1-14 of Sartelet et al. are noted. Proper grammatical interpretation of the sentence of column 2, lines 7-11 means that the times of column 2, lines 10-11 refer back to "potlife". This is supported by column 5, lines 19-22 and 57-59. Potlife is indicative of "cure". The applicant shows no evidence that the instantly claimed set and cure are not possessed by the composition of Sartelet et al.. The compositions of Sartelet et al. contain amines, which falls within the scope of the instant claims 135-137.

Csokasy et al. teaches the bonding strength of two component polyurethanes to glass. See the entire document. Note that RIM polyurethanes are two component polyurethanes. Figure two shows the use of glass frit to aid adhesion through the clear increase of surface area and corresponding increase in the number of adhesive bonds which give greater overall adhesion.

Mulhaupt et al. discloses the use of two component polyurethanes as adhesives for bonding metal, glass, and plastics (column 3, lines 24-44; column 4, lines 55-68; column 5, lines 1-16 and 65-68; and column 6, lines 1-16. Column 6, lines 55-56 show that the intention of the patentee is to bond glass to metal.

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Goel discloses the use of two component polyurethanes for bonding glass, metal, and plastic and the reasons which polyurethane adhesives are desirable in such bonding uses at column 1, lines 5-68; column 2, lines 1-68; column 3, lines 1-68; column 4, lines 1-68; and column 5, lines 1-21.

Bravet et al. discloses the use of two component polyurethanes to adhere safety glass to the vehicle at column 1, lines 41-52 and throughout the reference.

Many of the instant claims are silent with respect to the composition of the urethane adhesive. No unexpected results are demonstrated stemming from the use of the broadly claimed urethane adhesives of these claims, in a manner which is commensurate in scope with the cited prior art and the instant claims.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the two component polyurethane adhesive of Schmucker as the two component polyurethane adhesive referred to in the above paragraph because the skilled artisan would have expected such a polyurethane to adhere to primed glass and metal, as taught above and at column 4, lines 37-51 in addition to lending the improved properties of Schmucker to the adhered assembly and the method of making the assembly. The composition of Schmucker falls within the scope of the composition of the instant claims 131, 135-137, 153, and 155. See the entire document.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the adhesives of the instant claims 132-142 as the above discussed two

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component polyurethane adhesives because they are expected to give the glass/metal adhesion discussed above, the sag resistance formed via the hydrogen bonding of the urea groups formed upon their rapid reaction with NCO as described by Goel and Schmucker, and the applicant shows these to be commercially available two part polyurethane adhesives such as the betamates described above and in the instant specification.

Column 5, lines 11-68 and column 6, lines 1-14, of Repp et al., discloses the use of ceramic frit.

Schurmann discloses the window mechanical structure, including the use of adhesive in general (column 2, lines 57-61) for the use of adhesive and the entire document) but not the particulars of the adhesion composition and attachment points such as glass frit and primer.

Friese et al. discloses the mechanical structure of the sliding window except that it does not disclose the use of the instantly claimed adhesive. See the entire document.

Kronbetter discloses the mechanical structure of the sliding window except that it does not disclose the use of the instantly claimed adhesive. See the entire document.

Jackson discloses the mechanical structure of the window except that it does not disclose the use of the instantly claimed adhesive. See the entire document.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the adhesives of the instant claims to adhere automotive window glass to any of the instantly claimed assemblies because it is generally known to adhere glass to

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metal or plastic using the instantly claimed two component polyurethane compositions, as shown by Repp et al., Sartelet et al., Csokasy et al., Mulhaupt et al., and Goel and these window structures are expected to be subject to less stress than the hinged windows of Repp et al..

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to apply the adhesive bead discussed above in the thicknesses of the instant claims 144-146 because such thicknesses are disclosed by Repp et al. at column 7, lines 34-38.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the glass primers and the fritted glass of the instant claims to increase the bonding of the polyurethane to glass because such expedients are known to the ordinary skilled artisan as taught by Repp et al. (column 8, lines 60-68 and column 9, lines 1-23), Morgan et al. in the abstract, Csokasy et al. at Figure 2, and Bamford et al. at column 2, lines 22-60 and such fritted material will provide an area of larger surface area to which the adhesive can bond more strongly due to the corresponding increased number of adhesive bonds and mechanical friction.

The method of adhesion of the instant claims is encompassed by that of the above references to bonding glass to a structural member with two component polyurethane.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the automated application methods of the instant claims 147-150 and

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153-169 and inductive heating according to the instant claim 151-152 because inductive heating of two component polyurethanes is well known for increasing cure rates of the urethanes as taught by the Betamate Structural Adhesives data table which states "All Two Component Urethanes Can Be Induction Cured."; Betamate 73100/73003 Technical Bulletin describes the automated application of such polyurethane adhesives; the instant specification shows the claimed apparatus limitations to be well known; and Repp et al. discloses the use of robotics to attach the disclosed components at column 10, lines 35-38.

6. Claims 135-137 and 141-142 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. Claim 135 recites "said polyol component as compounds with hydroxy and/or amino functionality". Where "or" is used, this encompasses compounds having only amino groups. Such compounds are not polyols. It is therefore unclear if the claim encompasses polyols and amino compounds or if all of the "polyols" must contain multiple OH groups and may in addition contain NH groups. The latter situation makes the use of "or" confusing.

B. The instant claim 141 recites "said high amine plural amine". There is no antecedent basis for this terminology. It is therefore unclear what is intended. It appears that "high amine density plural amine" is intended.

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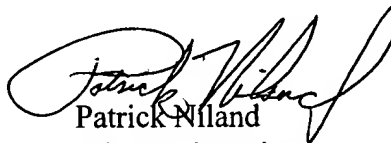
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Niland whose telephone number is (703) 308-3510. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-5408.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

pn

June 9, 1999


Patrick Niland
Primary Examiner
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